

FEDERAL OPERATING PERMIT

A FEDERAL OPERATING PERMIT IS HEREBY ISSUED TO
Union Carbide Corporation

AUTHORIZING THE OPERATION OF
Union Carbide Corporation
Building 24 Acetic Ester Unit
Industrial Organic Chemicals

LOCATED AT
Galveston County, Texas
Latitude 29° 22' 23" Longitude 94° 56' 39"
Regulated Entity Number: RN100219351

This permit is issued in accordance with and subject to the Texas Clean Air Act (TCAA), Chapter 382 of the Texas Health and Safety Code and Title 30 Texas Administrative Code Chapter 122 (30 TAC Chapter 122), Federal Operating Permits. Under 30 TAC Chapter 122, this permit constitutes the permit holder's authority to operate the site and emission units listed in this permit. Operations of the site and emission units listed in this permit are subject to all additional rules or amended rules and orders of the Commission pursuant to the TCAA.

This permit does not relieve the permit holder from the responsibility of obtaining New Source Review authorization for new, modified, or existing facilities in accordance with 30 TAC Chapter 116, Control of Air Pollution by Permits for New Construction or Modification.

The site and emission units authorized by this permit shall be operated in accordance with 30 TAC Chapter 122, the general terms and conditions, special terms and conditions, and attachments contained herein.

This permit shall expire five years from the date of issuance. The renewal requirements specified in 30 TAC § 122.241 must be satisfied in order to renew the authorization to operate the site and emission units.

Permit No: 01913 Issuance Date: _____

For the Commission

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General Terms and Conditions

The permit holder shall comply with all terms and conditions contained in 30 TAC § 122.143 (General Terms and Conditions), 30 TAC § 122.144 (Recordkeeping Terms and Conditions), 30 TAC § 122.145 (Reporting Terms and Conditions), and 30 TAC § 122.146 (Compliance Certification Terms and Conditions).

In accordance with 30 TAC § 122.144(1), records of required monitoring data and support information required by this permit, or any applicable requirement codified in this permit, are required to be maintained for a period of five years from the date of the monitoring report, sample, or application unless a longer data retention period is specified in an applicable requirement. The five year record retention period supersedes any less stringent retention requirement that may be specified in a condition of a permit identified in the New Source Review Authorization attachment.

If the permit holder chooses to demonstrate that this permit is no longer required, a written request to void this permit shall be submitted to the Texas Commission on Environmental Quality (TCEQ) by the Responsible Official in accordance with 30 TAC § 122.161(e). The permit holder shall comply with the permit's requirements, including compliance certification and deviation reporting, until notified by the TCEQ that this permit is voided.

The permit holder shall comply with 30 TAC Chapter 116 by obtaining a New Source Review authorization prior to new construction or modification of emission units located in the area covered by this permit.

All reports required by this permit must include in the submittal a cover letter which identifies the following information: company name, TCEQ regulated entity number, air account number (if assigned), site name, area name (if applicable), and Air Permits Division permit number(s).

Special Terms and Conditions:

Emission Limitations and Standards, Monitoring and Testing, and Recordkeeping and Reporting

1. Permit holder shall comply with the following requirements:
 - A. Emission units (including groups and processes) in the Applicable Requirements Summary attachment shall meet the limitations, standards, equipment specifications, monitoring, recordkeeping, reporting, testing, and other requirements listed in the Applicable Requirements Summary attachment to assure compliance with the permit.
 - B. The textual description in the column titled "Textual Description" in the Applicable Requirements Summary attachment is not enforceable and is not deemed as a substitute for the actual regulatory language. The Textual Description is provided for information purposes only.
 - C. A citation listed on the Applicable Requirements Summary attachment, which has a notation [G] listed before it, shall include the referenced section and subsection for all commission rules, or paragraphs for all federal and state regulations and all subordinate paragraphs, subparagraphs and clauses, subclauses, and items contained within the referenced citation as applicable requirements.

- D. When a grouped citation, notated with a [G] in the Applicable Requirements Summary, contains multiple compliance options, the permit holder must keep records of when each compliance option was used.
 - E. For the purpose of generating emission reduction credits through 30 TAC Chapter 101, Subchapter H, Division 1 (Emission Credit Banking and Trading), the permit holder shall comply with the following requirements:
 - (i) Title 30 TAC § 101.302 (relating to General Provisions)
 - (ii) Title 30 TAC § 101.303 (relating to Emission Reduction Credit Generation Certification)
 - (iii) Title 30 TAC § 101.304 (relating to Mobile Emission Reduction Credit Generation and Certification)
 - (iv) Title 30 TAC § 101.309 (relating to Emission Credit Banking and Trading)
 - (v) The terms and conditions by which the emission limits are established to generate the reduction credit are applicable requirements of this permit
 - F. For the purpose of generating discrete emission reduction credits through 30 TAC Chapter 101, Subchapter H, Division 4 (Discrete Emission Credit Banking and Trading), the permit holder shall comply with the following requirements:
 - (i) Title 30 TAC § 101.372 (relating to General Provisions)
 - (ii) Title 30 TAC § 101.373 (relating to Discrete Emission Reduction Credit Generation and Certification)
 - (iii) Title 30 TAC § 101.374 (relating to Mobile Discrete Emission Reduction Credit Generation and Certification)
 - (iv) Title 30 TAC § 101.378 (relating to Discrete Emission Credit Banking and Trading)
 - (v) The terms and conditions by which the emission limits are established to generate the discrete reduction credit are applicable requirements of this permit
2. The permit holder shall comply with the following sections of 30 TAC Chapter 101 (General Air Quality Rules):
- A. Title 30 TAC § 101.1 (relating to Definitions), insofar as the terms defined in this section are used to define the terms used in other applicable requirements
 - B. Title 30 TAC § 101.3 (relating to Circumvention)
 - C. Title 30 TAC § 101.8 (relating to Sampling), if such action has been requested by the TCEQ
 - D. Title 30 TAC § 101.9 (relating to Sampling Ports), if such action has been requested by the TCEQ

- E. Title 30 TAC § 101.10 (relating to Emissions Inventory Requirements)
 - F. Title 30 TAC § 101.201 (relating to Emission Event Reporting and Recordkeeping Requirements)
 - G. Title 30 TAC § 101.211 (relating to Scheduled Maintenance, Start-up, and Shutdown Reporting and Recordkeeping Requirements)
 - H. Title 30 TAC § 101.221 (relating to Operational Requirements)
 - I. Title 30 TAC § 101.222 (relating to Demonstrations)
 - J. Title 30 TAC § 101.223 (relating to Actions to Reduce Excessive Emissions)
3. Permit holder shall comply with the following requirements of 30 TAC Chapter 111:
- A. Visible emissions from stationary vents with a flow rate of less than 100,000 actual cubic feet per minute and constructed either before or after January 31, 1972 that are not listed in the Applicable Requirements Summary attachment for 30 TAC Chapter 111, Subchapter A, Division 1 , shall not exceed 20% opacity averaged over a six minute period. The permit holder shall comply with the following requirements for stationary vents at the site subject to this standard:
 - (i) Title 30 TAC § 111.111(a)(1)(B) (relating to Requirements for Specified Sources)
 - (ii) Title 30 TAC § 111.111(a)(1)(E)
 - (iii) Title 30 TAC § 111.111(a)(1)(F)(i), (ii), (iii), or (iv)
 - (iv) For emission units with vent emissions subject to 30 TAC § 111.111(a)(1)(B), complying with 30 TAC § 111.111(a)(1)(F)(ii), (iii), or (iv), and capable of producing visible emissions from, but not limited to, particulate matter, acid gases and NO_x, the permit holder shall also comply with the following periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146. These periodic monitoring requirements do not apply to vents that are not capable of producing visible emissions such as vents that emit only colorless VOCs; vents from non-fuming liquids; vents that provide passive ventilation, such as plumbing vents; or vent emissions from any other source that does not obstruct the transmission of light. Vents, as specified in the “Applicable Requirements Summary” attachment, that are subject to the emission limitation of 30 TAC § 111.111(a)(1)(B) are not subject to the following periodic monitoring requirements:
 - (1) An observation of stationary vents from emission units in operation shall be conducted at least once during each calendar quarter unless the emission unit is not operating for the entire quarter.
 - (2) For stationary vents from a combustion source, if an alternative to the normally fired fuel is fired for a period greater than or equal to 24 consecutive hours, the permit holder shall conduct an observation of the stationary vent for each such period to

determine if visible emissions are present. If such period is greater than 3 months, observations shall be conducted once during each quarter. Supplementing the normally fired fuel with natural gas or fuel gas to increase the net heating value to the minimum required value does not constitute creation of an alternative fuel.

- (3) Records of all observations shall be maintained.
- (4) Visible emissions observations of emission units operated during daylight hours shall be conducted no earlier than one hour after sunrise and no later than one hour before sunset. Visible emissions observations of emission units operated only at night must be made with additional lighting and the temporary installation of contrasting backgrounds. Visible emissions observations shall be made during times when the activities described in 30 TAC § 111.111(a)(1)(E) are not taking place. Visible emissions shall be determined with each stationary vent in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 mile, away from each stationary vent during the observation. For outdoor locations, the observer shall select a position where the sun is not directly in the observer's eyes. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor. A certified opacity reader is not required for visible emissions observations.
- (5) Compliance Certification:
 - (a) If visible emissions are not present during the observation, the RO may certify that the source is in compliance with the applicable opacity requirement in 30 TAC § 111.111(a)(1) and (a)(1)(B).
 - (b) However, if visible emissions are present during the observation, the permit holder shall either list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2) or conduct the appropriate opacity test specified in 30 TAC § 111.111(a)(1)(F) as soon as practicable, but no later than 24 hours after observing visible emissions to determine if the source is in compliance with the opacity requirements. If an opacity test is performed and the source is determined to be in compliance, the RO may certify that the source is in compliance with the applicable opacity requirement. However, if an opacity test is performed and the source is determined to be out of compliance, the permit holder shall list this occurrence as a deviation on the next deviation report as required under

30 TAC § 122.145(2). The opacity test must be performed by a certified opacity reader.

- (c) Some vents may be subject to multiple visible emission or monitoring requirements. All credible data must be considered when certifying compliance with this requirement even if the observation or monitoring was performed to demonstrate compliance with a different requirement.

B. For visible emissions from a building, enclosed facility, or other structure; the permit holder shall comply with the following requirements:

- (i) Title 30 TAC § 111.111(a)(7)(A) (relating to Requirements for Specified Sources)

- (ii) Title 30 TAC § 111.111(a)(7)(B)(i) or (ii)

- (iii) For a building containing an air emission source, enclosed facility, or other structure containing or associated with an air emission source subject to 30 TAC § 111.111(a)(7)(A), complying with 30 TAC § 111.111(a)(7)(B)(i) or (ii), and capable of producing visible emissions from, but not limited to, particulate matter, acid gases and NO_x, the permit holder shall also comply with the following periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146:

- (1) An observation of visible emissions from a building containing an air emission source, enclosed facility, or other structure containing or associated with an air emission source which is required to comply with 30 TAC § 111.111(a)(7)(A) shall be conducted at least once during each calendar quarter unless the air emission source or enclosed facility is not operating for the entire quarter.

- (2) Records of all observations shall be maintained.

- (3) Visible emissions observations of air emission sources or enclosed facilities operated during daylight hours shall be conducted no earlier than one hour after sunrise and no later than one hour before sunset. Visible emissions observations of air emission sources or enclosed facilities operated only at night must be made with additional lighting and the temporary installation of contrasting backgrounds. Visible emissions shall be determined with each emissions outlet in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 mile, away from each emissions outlet during the observation. For outdoor locations, the observer shall select a position where the sun is not directly in the observer's eyes. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the

observation shall be evaluated at the outlet prior to condensation of water vapor. A certified opacity reader is not required for visible emissions observations.

(4) Compliance Certification:

- (a) If visible emissions are not present during the observation, the RO may certify that the source is in compliance with the applicable opacity requirement in 30 TAC § 111.111(a)(7) and (a)(7)(A)
- (b) However, if visible emissions are present during the observation, the permit holder shall either list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2) or conduct the appropriate opacity test specified in 30 TAC § 111.111(a)(7)(B) as soon as practicable, but no later than 24 hours after observing visible emissions to determine if the source is in compliance with the opacity requirements. If an opacity test is performed and the source is determined to be in compliance, the RO may certify that the source is in compliance with the applicable opacity requirement. However, if an opacity test is performed and the source is determined to be out of compliance, the permit holder shall list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2). The opacity test must be performed by a certified opacity reader.

- C. Certification of opacity readers determining opacities under Method 9 (as outlined in 40 CFR Part 60, Appendix A) to comply with opacity monitoring requirements shall be accomplished by completing the Visible Emissions Evaluators Course, or approved agency equivalent, no more than 180 days before the opacity reading.
- D. For emission units with contributions from uncombined water, the permit holder shall comply with the requirements of 30 TAC § 111.111(b).

4. The permit holder shall comply with the following requirements for units subject to any subpart of 40 CFR Part 60, unless otherwise stated in the applicable subpart:

- A. Title 40 CFR § 60.7 (relating to Notification and Recordkeeping)
- B. Title 40 CFR § 60.8 (relating to Performance Tests)
- C. Title 40 CFR § 60.11 (relating to Compliance with Standards and Maintenance Requirements)
- D. Title 40 CFR § 60.12 (relating to Circumvention)
- E. Title 40 CFR § 60.13 (relating to Monitoring Requirements)
- F. Title 40 CFR § 60.14 (relating to Modification)

- G. Title 40 CFR § 60.15 (relating to Reconstruction)
 - H. Title 40 CFR § 60.19 (relating to General Notification and Reporting Requirements)
5. The permit holder shall comply with the requirements of 30 TAC Chapter 113, Subchapter C, § 113.100 for units subject to any subpart of 40 CFR Part 63, unless otherwise stated in the applicable subpart.
 6. For containers using controls specified in 40 CFR Part 63, Subpart PP, the permit holder shall comply with the following requirements (Title 30 TAC Chapter 113, Subchapter C, § 113.470 incorporated by reference):
 - A. Title 40 CFR § 63.922(b)(1) - (3), (c), (d), (d)(1) - (5), (e), and (f), (f)(1) - (4) (relating to Standards Container Level 1 Controls)
 - B. Title 40 CFR § 63.923(b)(1) - (3), (c), (d), (d)(1) - (5), (e), and (f), (f)(1) - (4) (relating to Standards - Container Level 2 Controls)
 - C. Title 40 CFR § 63.925(a)(1) - (8), and (b)(1) - (3) (relating to Test Methods and Procedures)
 - D. Title 40 CFR § 63.926(a)(1) - (3) (relating to Inspection and Monitoring Requirements)
 7. For the transfer of site remediation materials subject to 40 CFR Part 63, Subpart GGGGG off-site to another facility, the permit holder shall comply with the following requirements (Title 30 TAC, Subchapter C, § 113.1160 incorporated by reference):
 - A. Title 40 CFR § 63.7936(a), for the transfer of site remediation materials
 - B. Title 40 CFR § 63.7936(b)(1), for transfer to a landfill or land disposal unit
 - C. Title 40 CFR § 63.7936(b)(2), for transfer to a facility subject to 40 CFR Part 63, Subpart DD
 - D. Title 40 CFR § 63.7936(b)(3), (b)(3)(i) - (iv), for transfer to a facility managing the site remediation material according to the requirements of 40 CFR Part 63, Subpart GGGGG
 8. For containers managing remediation materials subject to 40 CFR Part 63, Subpart GGGGG, the permit holder shall comply with the following requirements (Title 30 TAC Chapter 113, Subchapter C, § 113.1160 incorporated by reference):
 - A. Title 40 CFR § 63.922(b)(1) - (3), (c), (d), (d)(1) - (5), (e), and (f), (f)(1) - (4) (relating to Standards - Container Level 1 Controls)
 - B. Title 40 CFR § 63.923(b)(1) - (3), (c), (d), (d)(1) - (5), (e), and (f), (f)(1) - (4) (relating to Standards - Container Level 2 Controls)
 - C. Title 40 CFR § 63.925(a)(1) - (8), and (b)(1) - (3) (relating to Test Methods and Procedures)

- D. Title 40 CFR § 63.926(a)(1) - (3) (relating to Inspection and Monitoring Requirements)
- E. Title 40 CFR § 63.7901(b) and (b)(1), for initial demonstration of compliance
- F. Title 40 CFR § 63.7901(c), (c)(1), and (c)(2), for initial demonstration of compliance
- G. Title 40 CFR § 63.7901(d), and (d)(1) - (4), for initial demonstration of compliance
- H. Title 40 CFR § 63.7903(b) and (b)(1), for continuous demonstration of compliance
- I. Title 40 CFR § 63.7903(c)(4), (c)(4)(i), and (c)(4)(ii), for continuous demonstration of compliance
- J. Title 40 CFR § 63.7903(d)(5), (d)(5)(i), and (d)(5)(ii), for continuous demonstration of compliance
- K. Title 40 CFR § 63.7952(c), for recordkeeping

New Source Review Authorization Requirements

- 9. Permit holder shall comply with the requirements of New Source Review authorizations issued or claimed by the permit holder for the permitted area, including permits, permits by rule, standard permits, flexible permits, special permits, permits for existing facilities including Voluntary Emissions Reduction Permits and Electric Generating Facility Permits issued under 30 TAC Chapter 116, Subchapter I, or special exemptions referenced in the New Source Review Authorization References attachment. These requirements:
 - A. Are incorporated by reference into this permit as applicable requirements
 - B. Shall be located with this operating permit
 - C. Are not eligible for a permit shield
- 10. The permit holder shall comply with the general requirements of 30 TAC Chapter 106, Subchapter A or the general requirements, if any, in effect at the time of the claim of any PBR.
- 11. The permit holder shall maintain records to demonstrate compliance with any emission limitation or standard that is specified in a permit by rule (PBR) or Standard Permit listed in the New Source Review Authorizations attachment. The records shall yield reliable data from the relevant time period that are representative of the emission unit's compliance with the PBR or Standard Permit. These records may include, but are not limited to, production capacity and throughput, hours of operation, safety data sheets (SDS), chemical composition of raw materials, speciation of air contaminant data, engineering calculations, maintenance records, fugitive data, performance tests, capture/control device efficiencies, direct pollutant monitoring (CEMS, COMS, or PEMS), or control device parametric monitoring. These records shall be made readily accessible and available as required by 30 TAC § 122.144. Any monitoring or recordkeeping data indicating noncompliance with the PBR or Standard Permit shall be considered and

reported as a deviation according to 30 TAC § 122.145 (Reporting Terms and Conditions).

Compliance Requirements

12. The permit holder shall certify compliance in accordance with 30 TAC § 122.146. The permit holder shall comply with 30 TAC § 122.146 using at a minimum, but not limited to, the continuous or intermittent compliance method data from monitoring, recordkeeping, reporting, or testing required by the permit and any other credible evidence or information. The certification period may not exceed 12 months and the certification must be submitted within 30 days after the end of the period being certified.
13. Use of Emission Credits to comply with applicable requirements:
 - A. Unless otherwise prohibited, the permit holder may use emission credits to comply with the following applicable requirements listed elsewhere in this permit:
 - (i) Title 30 TAC Chapter 115
 - (ii) Title 30 TAC Chapter 117
 - (iii) Offsets for Title 30 TAC Chapter 116
 - B. The permit holder shall comply with the following requirements in order to use the emission credits to comply with the applicable requirements:
 - (i) The permit holder must notify the TCEQ according to 30 TAC § 101.306(c)-(d)
 - (ii) The emission credits to be used must meet all the geographic, timeliness, applicable pollutant type, and availability requirements listed in 30 TAC Chapter 101, Subchapter H, Division 1
 - (iii) The executive director has approved the use of the credit according to 30 TAC § 101.306(c)-(d)
 - (iv) The permit holder keeps records of the use of credits towards compliance with the applicable requirements in accordance with 30 TAC § 101.302(g) and 30 TAC Chapter 122
 - (v) Title 30 TAC § 101.305 (relating to Emission Reductions Achieved Outside the United States)
14. Use of Discrete Emission Credits to comply with the applicable requirements:
 - A. Unless otherwise prohibited, the permit holder may use discrete emission credits to comply with the following applicable requirements listed elsewhere in this permit:
 - (i) Title 30 TAC Chapter 115
 - (ii) Title 30 TAC Chapter 117

- (iii) If applicable, offsets for Title 30 TAC Chapter 116
 - (iv) Temporarily exceed state NSR permit allowables
- B. The permit holder shall comply with the following requirements in order to use the credit to comply with the applicable requirements:
- (i) The permit holder must notify the TCEQ according to 30 TAC § 101.376(d)
 - (ii) The discrete emission credits to be used must meet all the geographic, timeliness, applicable pollutant type, and availability requirements listed in 30 TAC Chapter 101, Subchapter H, Division 4
 - (iii) The executive director has approved the use of the discrete emission credits according to 30 TAC § 101.376(d)(1)(A)
 - (iv) The permit holder keeps records of the use of credits towards compliance with the applicable requirements in accordance with 30 TAC § 101.372(h) and 30 TAC Chapter 122
 - (v) Title 30 TAC § 101.375 (relating to Emission Reductions Achieved Outside the United States)

Permit Location

15. The permit holder shall maintain a copy of this permit and records related to requirements listed in this permit on site.

Permit Shield (30 TAC § 122.148)

16. A permit shield is granted for the emission units, groups, or processes specified in the attached "Permit Shield." Compliance with the conditions of the permit shall be deemed compliance with the specified potentially applicable requirements or specified potentially applicable state-only requirements listed in the attachment "Permit Shield." Permit shield provisions shall not be modified by the executive director until notification is provided to the permit holder. No later than 90 days after notification of a change in a determination made by the executive director, the permit holder shall apply for the appropriate permit revision to reflect the new determination. Provisional terms are not eligible for this permit shield. Any term or condition, under a permit shield, shall not be protected by the permit shield if it is replaced by a provisional term or condition or the basis of the term and condition changes.

Attachments

Applicable Requirements Summary

Permit Shield

New Source Review Authorization References

Applicable Requirements Summary

Unit Summary 13

Applicable Requirements Summary 20

Note: A “none” entry may be noted for some emission sources in this permit’s “Applicable Requirements Summary” under the heading of “Monitoring and Testing Requirements” and/or “Recordkeeping Requirements” and/or “Reporting Requirements.” Such a notation indicates that there are no requirements for the indicated emission source as identified under the respective column heading(s) for the stated portion of the regulation when the emission source is operating under the conditions of the specified SOP Index Number. However, other relevant requirements pursuant to 30 TAC Chapter 122 including Recordkeeping Terms and Conditions (30 TAC § 122.144), Reporting Terms and Conditions (30 TAC § 122.145), and Compliance Certification Terms and Conditions (30 TAC § 122.146) continue to apply.

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
E12B018	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R5121-01	30 TAC Chapter 115, Vent Gas Controls	Vent Type = Vent gas stream originates from a synthetic organic chemical manufacturing industry reactor process or distillation operation, as defined in 30 TAC § 115.10., Total Design Capacity = Total design capacity is greater than or equal to 1,100 tons per year for all chemicals produced within that unit., Flow Rate or VOC Concentration = Flow rate is greater than or equal to 0.011 scm/min or the VOC concentration is greater than or equal to 500 ppmv., 40 CFR 60 Subpart NNN Requirements = The distillation unit vent gas stream satisfies one of the following requirements of 40 CFR Part 60, Subpart NNN: TRE index value is greater than 8.0; or TRE index value is greater than 1.0 without the use of VOC emission control devices., 40 CFR 60 Subpart RRR Requirements = The reactor process vent gas stream satisfies neither of the following requirements of 40 CFR Part 60, Subpart RRR: TRE index value is greater than 8.0; or TRE index value is greater than 1.0 without the use of VOC emission control

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
					devices.
E12B018	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R5121-02	30 TAC Chapter 115, Vent Gas Controls	Vent Type = Title 30 TAC Chapter 115, Subchapter B, Vent Gas Control rules are applicable and the vent is not specifically classified under the rule.
E12B018	DISTILLATION OPERATIONS	N/A	60NNN-01	40 CFR Part 60, Subpart NNN	No changing attributes.
E12B019	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R5121-01	30 TAC Chapter 115, Vent Gas Controls	Vent Type = Vent gas stream originates from a synthetic organic chemical manufacturing industry reactor process or distillation operation, as defined in 30 TAC § 115.10., Alternate Control Requirement = Alternate control is not used., Control Device Type = Smokeless flare, Total Design Capacity = Total design capacity is greater than or equal to 1,100 tons per year for all chemicals produced within that unit., Flow Rate or VOC Concentration = Flow rate is greater than or equal to 0.011 scm/min or the VOC concentration is greater than or equal to 500 ppmv., 40 CFR 60 Subpart NNN Requirements = The distillation unit vent gas stream satisfies one of the following requirements of 40 CFR Part 60, Subpart NNN: TRE

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
					index value is greater than 8.0; or TRE index value is greater than 1.0 without the use of VOC emission control devices., 40 CFR 60 Subpart RRR Requirements = The reactor process vent gas stream satisfies neither of the following requirements of 40 CFR Part 60, Subpart RRR: TRE index value is greater than 8.0; or TRE index value is greater than 1.0 without the use of VOC emission control devices.
E12B019	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R5121-02	30 TAC Chapter 115, Vent Gas Controls	Vent Type = Title 30 TAC Chapter 115, Subchapter B, Vent Gas Control rules are applicable and the vent is not specifically classified under the rule., Combined 24-Hour VOC Weight = Combined VOC weight is less than or equal to 100 pounds (45.4 kg), VOC Concentration/Emission Rate @ Max Operating Conditions = The VOC concentration or emission rate is less than the applicable exemption limit at maximum actual operating conditions and the alternate recordkeeping requirements of 30 TAC § 115.126(4) are being selected.

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
E12B019	DISTILLATION OPERATIONS	N/A	60NNN-01	40 CFR Part 60, Subpart NNN	No changing attributes.
E12B020	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R5121-01	30 TAC Chapter 115, Vent Gas Controls	Vent Type = Vent gas stream originates from a synthetic organic chemical manufacturing industry reactor process or distillation operation, as defined in 30 TAC § 115.10., Alternate Control Requirement = Alternate control is not used., Control Device Type = Smokeless flare, Total Design Capacity = Total design capacity is greater than or equal to 1,100 tons per year for all chemicals produced within that unit., Flow Rate or VOC Concentration = Flow rate is greater than or equal to 0.011 scm/min or the VOC concentration is greater than or equal to 500 ppmv., 40 CFR 60 Subpart NNN Requirements = The distillation unit vent gas stream satisfies one of the following requirements of 40 CFR Part 60, Subpart NNN: TRE index value is greater than 8.0; or TRE index value is greater than 1.0 without the use of VOC emission control devices., 40 CFR 60 Subpart RRR Requirements = The reactor process vent gas stream satisfies

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
					neither of the following requirements of 40 CFR Part 60, Subpart RRR: TRE index value is greater than 8.0; or TRE index value is greater than 1.0 without the use of VOC emission control devices.
E12B020	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R5121-02	30 TAC Chapter 115, Vent Gas Controls	Vent Type = Title 30 TAC Chapter 115, Subchapter B, Vent Gas Control rules are applicable and the vent is not specifically classified under the rule., Combined 24-Hour VOC Weight = Combined VOC weight is less than or equal to 100 pounds (45.4 kg), VOC Concentration/Emission Rate @ Max Operating Conditions = The VOC concentration or emission rate is less than the applicable exemption limit at maximum actual operating conditions and the alternate recordkeeping requirements of 30 TAC § 115.126(4) are being selected.
E12B020	DISTILLATION OPERATIONS	N/A	60NNN-01	40 CFR Part 60, Subpart NNN	No changing attributes.
E12B021	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R5121-01	30 TAC Chapter 115, Vent Gas Controls	Vent Type = Vent gas stream originates from a synthetic organic chemical manufacturing industry reactor process or distillation operation, as defined

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
					<p>in 30 TAC § 115.10., Total Design Capacity = Total design capacity is greater than or equal to 1,100 tons per year for all chemicals produced within that unit., Flow Rate or VOC Concentration = Flow rate is greater than or equal to 0.011 scm/min or the VOC concentration is greater than or equal to 500 ppmv., 40 CFR 60 Subpart NNN Requirements = The distillation unit vent gas stream satisfies one of the following requirements of 40 CFR Part 60, Subpart NNN: TRE index value is greater than 8.0; or TRE index value is greater than 1.0 without the use of VOC emission control devices., 40 CFR 60 Subpart RRR Requirements = The reactor process vent gas stream satisfies neither of the following requirements of 40 CFR Part 60, Subpart RRR: TRE index value is greater than 8.0; or TRE index value is greater than 1.0 without the use of VOC emission control devices.</p>

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
E12B021	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R5121-02	30 TAC Chapter 115, Vent Gas Controls	Vent Type = Title 30 TAC Chapter 115, Subchapter B, Vent Gas Control rules are applicable and the vent is not specifically classified under the rule.
F12B001-01	FUGITIVE EMISSION UNITS	N/A	R5352-01	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	No changing attributes.
F12B001-01	FUGITIVE EMISSION UNITS	N/A	60VV-ALL	40 CFR Part 60, Subpart VV	No changing attributes.
GRP-TKS1	STORAGE TANKS/VESSELS	T12B2105, T12B2108, T12B2300, T12B3004	R5112-01	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
GRP-TKS2	STORAGE TANKS/VESSELS	T12B3201	R5112-01	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
GRP-TKS3	STORAGE TANKS/VESSELS	T12B3009, T12B3010, T12B3012, T12B3013	R5112-01	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
T12B2107R	STORAGE TANKS/VESSELS	N/A	R5112-01	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
T12B2301	STORAGE TANKS/VESSELS	N/A	R5112-01	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
T12B3001	STORAGE TANKS/VESSELS	N/A	R5112-01	30 TAC Chapter 115, Storage of VOCs	No changing attributes.

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition I.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
E12B018	EP	R5121-01	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.127(a)(4)(D) § 115.127(a)(4)	Any distillation operation vent gas stream which meets the requirements of 40 Code of Federal Regulations (CFR) §60.660(c)(4) or §60.662(c) (concerning Subpart NNN - Standards of Performance for VOC Emissions From SOCM Distillation Operations, December 14, 2000) is exempt from the requirements of §115.121(a)(2)(A) of this title.	None	None	None
E12B018	EP	R5121-02	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.122(a)(1) § 115.121(a)(1) § 115.122(a)(1)(B) § 60.18	Vent gas streams affected by §115.121(a)(1) must be controlled properly with a control efficiency of at least 90% or to a volatile organic compound (VOC) concentration of no more than 20 parts per million (ppmv) (on a dry basis corrected to 3.0% oxygen for combustion devices).	[G]§ 115.125 § 115.126(1) § 115.126(1)(B) § 115.126(2)	§ 115.126 § 115.126(1) § 115.126(1)(B) § 115.126(2)	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition I.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
E12B018	EP	60NNN-01	VOC/TOC	40 CFR Part 60, Subpart NNN	§ 60.660(c)(4) § 60.662(c)	Each affected facility with a total resource effectiveness (TRE) index value > 8.0 is exempt from this subpart except for § 60.662; § 60.664(d), (e), (f); and § 60.665(h) and (l).	[G]§ 60.664(e) § 60.664(f) [G]§ 60.664(f)(1) § 60.664(f)(2) § 60.664(g) § 60.664(g)(1) § 60.664(g)(2)	[G]§ 60.665(h) § 60.665(p)	§ 60.664(g)(1) § 60.665(l) § 60.665(l)(7) § 60.665(p)
E12B019	EP	R5121-01	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.127(a)(4)(D) § 115.127(a)(4)	Any distillation operation vent gas stream which meets the requirements of 40 Code of Federal Regulations (CFR) §60.660(c)(4) or §60.662(c) (concerning Subpart NNN - Standards of Performance for VOC Emissions From SOCM Distillation Operations, December 14, 2000) is exempt from the requirements of §115.121(a)(2)(A) of this title.	None	None	None
E12B019	EP	R5121-02	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.127(a)(2)(A) [G]§ 115.122(a)(4) § 115.127(a)(2)	A vent gas stream having a combined weight of volatile organic compounds (VOC) equal to or less than 100 pounds in any continuous 24-hour period is exempt from §115.121(a)(1) of this title.	[G]§ 115.125 § 115.126(2)	§ 115.126 § 115.126(2) § 115.126(4)	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition I.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
E12B019	EP	60NNN-01	VOC/TOC	40 CFR Part 60, Subpart NNN	§ 60.662(b) § 60.18	Each affected facility shall combust the emissions in a flare that meets the requirements of § 60.18.	§ 60.663(b) § 60.663(b)(1) § 60.663(b)(2) § 60.664(a) § 60.664(d) [G]§ 60.664(e)	§ 60.663(b)(2) § 60.665(b) § 60.665(b)(3) § 60.665(d) § 60.665(f)	§ 60.665(a) § 60.665(b) § 60.665(b)(3) § 60.665(k) § 60.665(l) § 60.665(l)(2) § 60.665(l)(4)
E12B020	EP	R5121-01	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.127(a)(4)(D) § 115.127(a)(4)	Any distillation operation vent gas stream which meets the requirements of 40 Code of Federal Regulations (CFR) §60.660(c)(4) or §60.662(c) (concerning Subpart NNN - Standards of Performance for VOC Emissions From SOCM Distillation Operations, December 14, 2000) is exempt from the requirements of §115.121(a)(2)(A) of this title.	None	None	None
E12B020	EP	R5121-02	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.127(a)(2)(A) [G]§ 115.122(a)(4) § 115.127(a)(2)	A vent gas stream having a combined weight of volatile organic compounds (VOC) equal to or less than 100 pounds in any continuous 24-hour period is exempt from §115.121(a)(1) of this title.	[G]§ 115.125 § 115.126(2)	§ 115.126 § 115.126(2) § 115.126(4)	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition I.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
E12B020	EP	60NNN-01	VOC/TOC	40 CFR Part 60, Subpart NNN	§ 60.662(b) § 60.18	Each affected facility shall combust the emissions in a flare that meets the requirements of § 60.18.	§ 60.663(b) § 60.663(b)(1) § 60.663(b)(2) § 60.664(a) § 60.664(d) [G]§ 60.664(e)	§ 60.663(b)(2) § 60.665(b) § 60.665(b)(3) § 60.665(d) § 60.665(f)	§ 60.665(a) § 60.665(b) § 60.665(b)(3) § 60.665(k) § 60.665(l) § 60.665(l)(2) § 60.665(l)(4)
E12B021	EP	R5121-01	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.127(a)(4)(D) § 115.127(a)(4)	Any distillation operation vent gas stream which meets the requirements of 40 Code of Federal Regulations (CFR) §60.660(c)(4) or §60.662(c) (concerning Subpart NNN - Standards of Performance for VOC Emissions From SOCM Distillation Operations, December 14, 2000) is exempt from the requirements of §115.121(a)(2)(A) of this title.	None	None	None
E12B021	EP	R5121-02	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.122(a)(1) § 115.121(a)(1) § 115.122(a)(1)(B) § 60.18	Vent gas streams affected by §115.121(a)(1) must be controlled properly with a control efficiency of at least 90% or to a volatile organic compound (VOC) concentration of no more than 20 parts per million (ppmv) (on a dry basis corrected to 3.0% oxygen for combustion devices).	[G]§ 115.125 § 115.126(1) § 115.126(1)(B) § 115.126(2)	§ 115.126 § 115.126(1) § 115.126(1)(B) § 115.126(2)	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition I.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
F12B001-01	EU	R5352-01	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.357(10)	Instrumentation systems, as defined in 40 CFR §63.161 (January 17, 1997), that meet 40 CFR §63.169 (June 20, 1996) are exempt from the requirements of this division except §115.356(3)(C) of this title.	None	§ 115.356 § 115.356(3) [G]§ 115.356(3)(C)	None
F12B001-01	EU	R5352-01	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.357(11)	Sampling connection systems, as defined in 40 CFR §63.161 (January 17, 1997), that meet the requirements of 40 CFR §63.166(a) and (b) (June 20, 1996) are exempt from the requirements of this division except §115.356(3)(C) of this title.	None	§ 115.356 § 115.356(3) [G]§ 115.356(3)(C)	None
F12B001-01	EU	R5352-01	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.352(1)(A) § 115.352(1) § 115.352(10) § 115.352(2) § 115.352(2)(A) § 115.352(3) § 115.352(7)	No process drains shall be allowed to have a VOC leak, for more than 15 days after discovery, which exceeds a screening concentration greater than 500 parts per million by volume above background as methane, or the dripping or exuding of process fluid based on sight, smell, or sound.	§ 115.354(1) § 115.354(10) § 115.354(5) § 115.354(6) § 115.354(9) [G]§ 115.355	§ 115.352(7) § 115.354(10) § 115.356 [G]§ 115.356(1) [G]§ 115.356(2) § 115.356(3) § 115.356(3)(A) § 115.356(3)(B) § 115.356(5)	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition I.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
F12B001-01	EU	R5352-01	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.352(1)(A) § 115.352(1) § 115.352(10) § 115.352(2) § 115.352(2)(A) § 115.352(2)(B) § 115.352(3) § 115.352(5) § 115.352(7) § 115.352(9) § 115.357(12) § 115.357(8) § 115.357(9)	No pressure relief valves shall be allowed to have a VOC leak, for more than 15 days after discovery, which exceeds a screening concentration greater than 500 parts per million by volume above background as methane, or the dripping or exuding of process fluid based on sight, smell, or sound.	§ 115.354(1) § 115.354(10) § 115.354(2) § 115.354(4) § 115.354(5) § 115.354(6) [G]§ 115.354(7) § 115.354(9) [G]§ 115.355	§ 115.352(7) § 115.354(10) § 115.356 [G]§ 115.356(1) [G]§ 115.356(2) § 115.356(3) § 115.356(3)(A) § 115.356(3)(B) [G]§ 115.356(3)(C) § 115.356(5)	[G]§ 115.354(7)
F12B001-01	EU	R5352-01	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.352(1)(A) § 115.352(1) § 115.352(10) § 115.352(2) § 115.352(2)(A) § 115.352(2)(B) § 115.352(3) § 115.352(4) § 115.352(5) § 115.352(6) § 115.352(7) § 115.357(12) § 115.357(8) § 115.357(9)	No valves shall be allowed to have a VOC leak, for more than 15 days after discovery, which exceeds a screening concentration greater than 500 parts per million by volume above background as methane, or the dripping or exuding of process fluid based on sight, smell, or sound.	§ 115.354(1) § 115.354(10) § 115.354(2) § 115.354(5) § 115.354(6) [G]§ 115.354(7) § 115.354(9) [G]§ 115.355	§ 115.352(7) § 115.354(10) § 115.356 [G]§ 115.356(1) [G]§ 115.356(2) § 115.356(3) § 115.356(3)(A) § 115.356(3)(B) [G]§ 115.356(3)(C) § 115.356(5)	[G]§ 115.354(7)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition I.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
F12B001-01	EU	R5352-01	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.352(1)(A) § 115.352(1) § 115.352(10) § 115.352(2) § 115.352(2)(A) § 115.352(3) § 115.352(5) § 115.352(7) § 115.352(8) § 115.357(12) § 115.357(8)	No flanges or other connectors shall be allowed to have a VOC leak, for more than 15 days after discovery which exceeds a screening concentration greater than 500 parts per million by volume above background as methane, or the dripping or exuding of process fluid based on sight, smell, or sound.	§ 115.354(1) § 115.354(10) § 115.354(11) § 115.354(3) § 115.354(5) § 115.354(6) § 115.354(9) [G]§ 115.355 § 115.357(1)	§ 115.352(7) § 115.354(10) § 115.356 [G]§ 115.356(1) [G]§ 115.356(2) § 115.356(3) § 115.356(3)(A) § 115.356(3)(B) [G]§ 115.356(3)(C) § 115.356(5)	None
F12B001-01	EU	R5352-01	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.352(1)(B) § 115.352(1) § 115.352(10) § 115.352(2) § 115.352(2)(A) § 115.352(2)(C) § 115.352(2)(C)(i) § 115.352(2)(C)(ii) § 115.352(2)(C)(iii) § 115.352(3) § 115.352(5) § 115.352(7) § 115.357(12) § 115.357(8)	No pump seals shall be allowed to have a VOC leak, for more than 15 days after discovery which exceeds a screening concentration greater than 10,000 parts per million by volume above background as methane, or the dripping or exuding of process fluid based on sight, smell, or sound.	§ 115.354(1) § 115.354(10) § 115.354(2) § 115.354(5) § 115.354(6) § 115.354(9) [G]§ 115.355	§ 115.352(7) § 115.354(10) § 115.356 [G]§ 115.356(1) [G]§ 115.356(2) § 115.356(3) § 115.356(3)(A) § 115.356(3)(B) [G]§ 115.356(3)(C) § 115.356(5)	None
F12B001-01	EU	60VV-ALL	VOC	40 CFR Part 60, Subpart VV	§ 60.482-1(d) § 60.486(k)	Equipment that is in vacuum service is excluded from the requirements of §60.482-2 to §60.482-10, if it is identified as required in §60.486(e)(5).	None	[G]§ 60.486(a) § 60.486(e) § 60.486(e)(1) § 60.486(e)(5) § 60.486(j)	§ 60.487(a) [G]§ 60.487(b) [G]§ 60.487(c) § 60.487(e)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition I.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
F12B001-01	EU	60VV-ALL	VOC	40 CFR Part 60, Subpart VV	§ 60.482-2(b)(1) § 60.482-1(a) § 60.482-1(b) § 60.482-1(g) § 60.482-2(a)(2) [G]§ 60.482-2(b)(2) § 60.482-2(c)(1) [G]§ 60.482-2(c)(2) § 60.482-2(d) [G]§ 60.482-2(d)(1) § 60.482-2(d)(2) § 60.482-2(d)(3) [G]§ 60.482-2(d)(4) [G]§ 60.482-2(d)(5) [G]§ 60.482-2(d)(6) [G]§ 60.482-2(e) § 60.482-2(f) [G]§ 60.482-2(g) § 60.482-2(h) § 60.482-9(a) § 60.482-9(b) [G]§ 60.482-9(d) § 60.482-9(f) § 60.486(k)	If an instrument reading of 10,000 ppm or greater is measured for pumps in light liquid service, a leak is detected.	§ 60.482-1(f)(1) § 60.482-1(f)(2) [G]§ 60.482-1(f)(3) § 60.482-2(a)(1) [G]§ 60.482-2(b)(2) [G]§ 60.482-2(d)(4) § 60.485(a) [G]§ 60.485(b) [G]§ 60.485(c) [G]§ 60.485(d) [G]§ 60.485(e) § 60.485(f)	§ 60.482-1(g) [G]§ 60.486(a) [G]§ 60.486(b) [G]§ 60.486(c) § 60.486(e) § 60.486(e)(1) [G]§ 60.486(e)(2) [G]§ 60.486(e)(4) [G]§ 60.486(f) [G]§ 60.486(h) § 60.486(j)	§ 60.487(a) [G]§ 60.487(b) [G]§ 60.487(c) § 60.487(e)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition I.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
F12B001-01	EU	60VV-ALL	VOC	40 CFR Part 60, Subpart VV	§ 60.482-3(a) § 60.482-1(a) § 60.482-1(b) § 60.482-1(g) [G]§ 60.482-3(b) § 60.482-3(c) § 60.482-3(d) § 60.482-3(e)(1) § 60.482-3(e)(2) § 60.482-3(f) § 60.482-3(g)(1) § 60.482-3(g)(2) § 60.482-3(h) [G]§ 60.482-3(i) § 60.482-3(j) § 60.482-9(a) § 60.482-9(b) § 60.486(k)	Each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of VOC to the atmosphere, except as provided in §60.482-1(c) and paragraphs (h), (i), and (j) of this section.	§ 60.485(a) [G]§ 60.485(b) [G]§ 60.485(c) [G]§ 60.485(d) § 60.485(f)	§ 60.482-1(g) [G]§ 60.486(a) [G]§ 60.486(b) [G]§ 60.486(c) § 60.486(e) § 60.486(e)(1) [G]§ 60.486(e)(2) [G]§ 60.486(e)(4) [G]§ 60.486(h) § 60.486(j)	§ 60.487(a) [G]§ 60.487(b) [G]§ 60.487(c) § 60.487(e)
F12B001-01	EU	60VV-ALL	VOC	40 CFR Part 60, Subpart VV	§ 60.482-4(a) § 60.482-1(a) § 60.482-1(b) § 60.482-1(g) § 60.482-4(b)(1) § 60.482-4(c) § 60.482-4(d)(1) § 60.482-4(d)(2) § 60.482-9(a) § 60.482-9(b) § 60.486(k)	Except during pressure releases, each pressure relief device in gas/vapor service shall be operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as determined by the methods specified in § 60.485(c).	§ 60.482-4(b)(2) § 60.485(a) [G]§ 60.485(b) [G]§ 60.485(c) [G]§ 60.485(d) § 60.485(f)	§ 60.482-1(g) [G]§ 60.486(a) § 60.486(e) § 60.486(e)(1) § 60.486(e)(3) [G]§ 60.486(e)(4) § 60.486(j)	§ 60.487(a) [G]§ 60.487(b) [G]§ 60.487(c) § 60.487(e)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition I.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
F12B001-01	EU	60VV-ALL	VOC	40 CFR Part 60, Subpart VV	§ 60.482-5(a) § 60.482-1(a) § 60.482-1(b) § 60.482-1(g) [G]§ 60.482-5(b) § 60.482-5(c) § 60.486(k)	Each sampling connection system shall be equipped with a closed-purge, closed-loop, or closed-vent system, except as provided in §60.482-1(c) and paragraph (c) of this section.	§ 60.485(a) [G]§ 60.485(b) [G]§ 60.485(d) § 60.485(f)	§ 60.482-1(g) [G]§ 60.486(a) § 60.486(e) § 60.486(e)(1) § 60.486(j)	§ 60.487(a) [G]§ 60.487(b) [G]§ 60.487(c) § 60.487(e)
F12B001-01	EU	60VV-ALL	VOC	40 CFR Part 60, Subpart VV	§ 60.482-6(a)(1) § 60.482-1(a) § 60.482-1(b) § 60.482-1(g) § 60.482-6(a)(2) § 60.482-6(b) § 60.482-6(c) § 60.482-6(d) § 60.482-6(e) § 60.486(k)	Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in §60.482-1(c) and paragraphs (d) and (e) of this section.	§ 60.485(a) [G]§ 60.485(b) [G]§ 60.485(d) § 60.485(f)	§ 60.482-1(g) [G]§ 60.486(a) § 60.486(e) § 60.486(e)(1) § 60.486(j)	§ 60.487(a) [G]§ 60.487(b) [G]§ 60.487(c) § 60.487(e)
F12B001-01	EU	60VV-ALL	VOC	40 CFR Part 60, Subpart VV	§ 60.482-7(b) § 60.482-1(a) § 60.482-1(b) § 60.482-1(g) § 60.482-7(d)(1) § 60.482-7(d)(2) [G]§ 60.482-7(e) [G]§ 60.482-7(f) [G]§ 60.482-7(g) [G]§ 60.482-7(h) § 60.482-9(a) § 60.482-9(b) [G]§ 60.482-9(c) § 60.482-9(e) § 60.482-9(f) § 60.486(k)	If an instrument reading of 10,000 ppm or greater is measured for valves in gas/vapor service and in light liquid service, a leak is detected.	§ 60.482-1(f)(1) § 60.482-1(f)(2) [G]§ 60.482-1(f)(3) § 60.482-7(a)(1) [G]§ 60.482-7(a)(2) § 60.482-7(c)(1)(i) § 60.482-7(c)(1)(ii) § 60.482-7(c)(2) § 60.485(a) [G]§ 60.485(b) [G]§ 60.485(c) [G]§ 60.485(d) [G]§ 60.485(e) § 60.485(f)	§ 60.482-1(g) [G]§ 60.486(a) [G]§ 60.486(b) [G]§ 60.486(c) § 60.486(e) § 60.486(e)(1) [G]§ 60.486(e)(2) [G]§ 60.486(e)(4) [G]§ 60.486(f) § 60.486(j)	§ 60.487(a) [G]§ 60.487(b) [G]§ 60.487(c) § 60.487(e)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition I.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
F12B001-01	EU	60VV-ALL	VOC	40 CFR Part 60, Subpart VV	§ 60.482-8(b) § 60.482-1(a) § 60.482-1(b) § 60.482-1(g) § 60.482-8(a) § 60.482-8(a)(2) § 60.482-8(c)(1) § 60.482-8(c)(2) § 60.482-8(d) § 60.482-9(a) § 60.482-9(b) [G]§ 60.482-9(d) § 60.482-9(f) § 60.486(k)	For pumps in heavy liquid service, if an instrument reading of 10,000 ppm or greater is measured, a leak is detected.	§ 60.482-8(a)(1) § 60.485(a) [G]§ 60.485(b) [G]§ 60.485(d) § 60.485(f)	§ 60.482-1(g) [G]§ 60.486(a) [G]§ 60.486(b) [G]§ 60.486(c) § 60.486(e) § 60.486(e)(1) § 60.486(j)	§ 60.487(a) [G]§ 60.487(b) [G]§ 60.487(c) § 60.487(e)
F12B001-01	EU	60VV-ALL	VOC	40 CFR Part 60, Subpart VV	§ 60.482-8(b) § 60.482-1(a) § 60.482-1(b) § 60.482-1(g) § 60.482-8(a) § 60.482-8(a)(2) § 60.482-8(c)(1) § 60.482-8(c)(2) § 60.482-8(d) § 60.482-9(a) § 60.482-9(b) § 60.482-9(e) § 60.482-9(f) § 60.486(k)	For valves in heavy liquid service, if an instrument reading of 10,000 ppm or greater is measured, a leak is detected.	§ 60.482-8(a)(1) § 60.485(a) [G]§ 60.485(b) [G]§ 60.485(d) § 60.485(f)	§ 60.482-1(g) [G]§ 60.486(a) [G]§ 60.486(b) [G]§ 60.486(c) § 60.486(e) § 60.486(e)(1) § 60.486(j)	§ 60.487(a) [G]§ 60.487(b) [G]§ 60.487(c) § 60.487(e)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition I.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
F12B001-01	EU	60VV-ALL	VOC	40 CFR Part 60, Subpart VV	§ 60.482-8(b) § 60.482-1(a) § 60.482-1(b) § 60.482-1(g) § 60.482-8(a) § 60.482-8(a)(2) § 60.482-8(c)(1) § 60.482-8(c)(2) § 60.482-8(d) § 60.482-9(a) § 60.482-9(b) § 60.486(k)	For pressure relief devices in light liquid or in heavy liquid service, if an instrument reading of 10,000 ppm or greater is measured, a leak is detected.	§ 60.482-8(a)(1) § 60.485(a) [G]§ 60.485(b) [G]§ 60.485(d) [G]§ 60.485(e) § 60.485(f)	§ 60.482-1(g) [G]§ 60.486(a) [G]§ 60.486(b) [G]§ 60.486(c) § 60.486(e) § 60.486(e)(1) § 60.486(j)	§ 60.487(a) [G]§ 60.487(b) [G]§ 60.487(c) § 60.487(e)
F12B001-01	EU	60VV-ALL	VOC	40 CFR Part 60, Subpart VV	§ 60.482-8(b) § 60.482-1(a) § 60.482-1(b) § 60.482-1(g) § 60.482-8(a) § 60.482-8(a)(2) § 60.482-8(c)(1) § 60.482-8(c)(2) § 60.482-8(d) § 60.482-9(a) § 60.482-9(b) § 60.486(k)	For flanges and other connectors, if an instrument reading of 10,000 ppm or greater is measured, a leak is detected.	§ 60.482-8(a)(1) § 60.485(a) [G]§ 60.485(b) [G]§ 60.485(d) § 60.485(f)	§ 60.482-1(g) [G]§ 60.486(a) [G]§ 60.486(b) [G]§ 60.486(c) § 60.486(e) § 60.486(e)(1) § 60.486(j)	§ 60.487(a) [G]§ 60.487(b) [G]§ 60.487(c) § 60.487(e)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition I.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
F12B001-01	EU	60VV-ALL	VOC	40 CFR Part 60, Subpart VV	[G]§ 60.482-1(e) § 60.486(k)	Equipment that an owner or operator designates as being in VOC service less than 300 hours (hr)/yr is excluded from the requirements of §§ 60.482-2 through 60.482-10 if it is identified as required in §60.486(e)(6) and it meets any of the conditions specified in paragraphs (e)(1) through (3) of this section. §60.482-1(e)(1)-(3)	None	§ 60.486 [G]§ 60.486(a) § 60.486(e) § 60.486(e)(1) § 60.486(e)(6) § 60.486(j)	§ 60.487(a) [G]§ 60.487(b) [G]§ 60.487(c) § 60.487(e)
GRP-TKS1	EU	R5112-01	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.111(a)(1)	Except as provided in § 115.118, a storage tank storing VOC with a true vapor pressure less than 1.5 psia is exempt from the requirements of this division.	[G]§ 115.117	§ 115.118(a)(1) § 115.118(a)(5) § 115.118(a)(7)	None
GRP-TKS2	EU	R5112-01	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.111(a)(1)	Except as provided in § 115.118, a storage tank storing VOC with a true vapor pressure less than 1.5 psia is exempt from the requirements of this division.	[G]§ 115.117	§ 115.118(a)(1) § 115.118(a)(5) § 115.118(a)(7)	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition I.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
GRP-TKS3	EU	R5112-01	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.111(a)(1)	Except as provided in § 115.118, a storage tank storing VOC with a true vapor pressure less than 1.5 psia is exempt from the requirements of this division.	[G]§ 115.117	§ 115.118(a)(1) § 115.118(a)(5) § 115.118(a)(7)	None
T12B2107R	EU	R5112-01	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(e)(1) § 115.112(e)(3) § 115.112(e)(3)(C) § 60.18	No person shall place, store, or hold VOC in any storage tank unless the storage tank is capable of maintaining working pressure sufficient at all times to prevent any vapor or gas loss to the atmosphere or is in compliance with the control requirements specified in Table 1 of this paragraph for VOC other than crude oil and condensate or Table 2 of subsection (a)(1) of this paragraph for crude oil and condensate.	§ 115.115(a) § 115.115(a)(6) § 115.116(a)(2) [G]§ 115.117	§ 115.118(a)(4) § 115.118(a)(4)(F) § 115.118(a)(5) § 115.118(a)(7)	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition I.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
T12B2301	EU	R5112-01	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(e)(1) § 115.112(e)(3) § 115.112(e)(3)(C) § 60.18	No person shall place, store, or hold VOC in any storage tank unless the storage tank is capable of maintaining working pressure sufficient at all times to prevent any vapor or gas loss to the atmosphere or is in compliance with the control requirements specified in Table 1 of this paragraph for VOC other than crude oil and condensate or Table 2 of subsection (a)(1) of this paragraph for crude oil and condensate.	§ 115.115(a) § 115.115(a)(6) § 115.116(a)(2) [G]§ 115.117	§ 115.118(a)(4) § 115.118(a)(4)(F) § 115.118(a)(5) § 115.118(a)(7)	None
T12B3001	EU	R5112-01	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.111(a)(1)	Except as provided in § 115.118, a storage tank storing VOC with a true vapor pressure less than 1.5 psia is exempt from the requirements of this division.	[G]§ 115.117	§ 115.118(a)(1) § 115.118(a)(5) § 115.118(a)(6)(A) § 115.118(a)(7)	None

Permit Shield

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Permit Shield

The Executive Director of the TCEQ has determined that the permit holder is not required to comply with the specific regulation(s) identified for each emission unit, group, or process in this table.

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
E12B104	N/A	40 CFR Part 60, Subpart RRR	A process unit that produces any of the chemicals listed in §60.707 as a product, co-product, by-product, or intermediate, but was constructed, reconstructed, or modified prior to June 29, 1990.
GRP-TKS1	T12B2105, T12B2108, T12B2300, T12B3004	40 CFR Part 60, Subpart K	Constructed prior to 6/11/1973.
GRP-TKS2	T12B3201	40 CFR Part 60, Subpart K	Constructed prior to 6/11/1973.
GRP-TKS3	T12B3009, T12B3010, T12B3012, T12B3013	40 CFR Part 60, Subpart K	Constructed prior to 6/11/1973.
T12B2107R	N/A	40 CFR Part 60, Subpart Kb	Storage capacity not greater than or equal to 19,800 gallons.
T12B2301	N/A	40 CFR Part 60, Subpart Kb	Storage capacity not greater than or equal to 19,800 gallons.
T12B3001	N/A	40 CFR Part 60, Subpart K	Constructed prior to 6/11/1973.

New Source Review Authorization References

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New Source Review Authorization References by Emission Unit 39

New Source Review Authorization References

The New Source Review authorizations listed in the table below are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Title 30 TAC Chapter 116 Permits, Special Permits, and Other Authorizations (Other Than Permits By Rule, PSD Permits, or NA Permits) for the Application Area.	
Authorization No.: 49023	Issuance Date: 08/25/2015
Permits By Rule (30 TAC Chapter 106) for the Application Area	
Number: 106.261	Version No./Date: 11/01/2003
Number: 106.262	Version No./Date: 11/01/2003
Number: 106.263	Version No./Date: 11/01/2001
Number: 106.478	Version No./Date: 09/04/2000
Number: 106.492	Version No./Date: 09/04/2000
Number: 106.532	Version No./Date: 09/04/2000

New Source Review Authorization References by Emissions Unit

The following is a list of New Source Review (NSR) authorizations for emission units listed elsewhere in this operating permit. The NSR authorizations are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Unit/Group/Process ID No.	Emission Unit Name/Description	New Source Review Authorization
E12B018	ESTERS BATCH STILL	49023, 106.261/11/01/2003, 106.262/11/01/2003, 106.492/09/04/2000
E12B019	ESTERS REFINING MILL #1	49023
E12B019	ESTERS REFINING STILL #1	49023, 106.261/11/01/2003, 106.262/11/01/2003, 106.492/09/04/2000
E12B020	ESTERS STRIPPING STILL	49023, 106.261/11/01/2003, 106.262/11/01/2003, 106.492/09/04/2000
E12B021	ESTERS REFINING MILL #2	49023
E12B104	ESTER BATCH STILL KETTLE	49023
F12B001-01	B24 ESTERS FUGITIVES	49023
T12B2105	TK 2105	49023
T12B2107R	TK 2107R	106.261/11/01/2003, 106.478/09/04/2000
T12B2108	TK 2108	49023
T12B2300	TK 2300	49023
T12B2301	TK 2301	106.261/11/01/2003, 106.478/09/04/2000
T12B3001	TK 3001	49023
T12B3004	TK 3004	49023
T12B3009	TK 3009	49023
T12B3010	TK 3010	49023, 106.261/11/01/2003, 106.262/11/01/2003

New Source Review Authorization References by Emissions Unit

The following is a list of New Source Review (NSR) authorizations for emission units listed elsewhere in this operating permit. The NSR authorizations are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Unit/Group/Process ID No.	Emission Unit Name/Description	New Source Review Authorization
T12B3012	TK 3012	49023
T12B3013	TK 3013	49023
T12B3201	TK 3201	49023

Appendix A

Acronym List 42

Acronym List

The following abbreviations or acronyms may be used in this permit:

ACFM	actual cubic feet per minute
AMOC	alternate means of control
ARP	Acid Rain Program
ASTM	American Society of Testing and Materials
B/PA	Beaumont/Port Arthur (nonattainment area)
CAM	Compliance Assurance Monitoring
CD	control device
CEMS	continuous emissions monitoring system
CFR	Code of Federal Regulations
COMS	continuous opacity monitoring system
CVS	closed vent system
D/FW	Dallas/Fort Worth (nonattainment area)
EP	emission point
EPA	U.S. Environmental Protection Agency
EU	emission unit
FCAA Amendments	Federal Clean Air Act Amendments
FOP	federal operating permit
gr/100 scf	grains per 100 standard cubic feet
HAP	hazardous air pollutant
H/G/B	Houston/Galveston/Brazoria (nonattainment area)
H ₂ S	hydrogen sulfide
ID No.	identification number
lb/hr	pound(s) per hour
MACT	Maximum Achievable Control Technology (40 CFR Part 63)
MMBtu/hr	Million British thermal units per hour
NA	nonattainment
N/A	not applicable
NADB	National Allowance Data Base
NESHAP	National Emission Standards for Hazardous Air Pollutants (40 CFR Part 61)
NO _x	nitrogen oxides
NSPS	New Source Performance Standard (40 CFR Part 60)
NSR	New Source Review
ORIS	Office of Regulatory Information Systems
Pb	lead
PBR	Permit By Rule
PEMS	predictive emissions monitoring system
PM	particulate matter
ppmv	parts per million by volume
PRO	process unit
PSD	prevention of significant deterioration
psia	pounds per square inch absolute
SIP	state implementation plan
SO ₂	sulfur dioxide
TCEQ	Texas Commission on Environmental Quality
TSP	total suspended particulate
TVP	true vapor pressure
U.S.C.	United States Code
VOC	volatile organic compound